

Everyone's a Photographer

Locksheath and Sarisbury Camera Club

Welcome to the

Basics Course

Ross Underwood

Draft Course Outline

- Week 1 Taking it off 'AUTO'
- Week 2 Life after AUTO
- Week 3 Fun on the computer
- Week 4 People Pictures
- Week 5 Making the Picture look right
- Week 6 Flash

Draft Course Outline

Does this cover what you want?

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Is there anything else you would like?

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Is there anything else you would like?

The course is very informal

- please ask questions as we go along
- discussion is good

Camera versus Phone

There maybe trouble ahead!



Camera versus Phone

Features:

	Phone	Compact Camera	DSLR (digital single lens reflex)
Photo	yes	yes	yes
Video	yes	yes	yes
Panoramic format	yes	yes	?
HDR (High Dynamic Range)	yes	yes	yes
Flash	yes	yes	?
Time Release	yes	yes	yes
Colour Balance control	yes	?	yes
Upload /Send facility	yes	?	-
Charge battery when connected	yes	?	-
In-camera photo editing	yes	?	-
Super Slo-Mo	yes	?	-

Camera versus Phone

What do you get with a DSLR then?

Quality

Flexibility

CONTROL

Camera versus Phone

What do you get with a Phone?

Increasing **Quality**

Amazing **Flexibility**

Increasing **Control**

Camera versus Phone

And you carry it all the time!



Phones have always been great for,
quick grab shots



Phones have always been great for,
quick grab shots
but macro is so much easier

Samsung Galaxy S9



Frankincam used by the David Attenborough team to film Wood Ants

Taking it off AUTO

What are the problems with 'Auto'?

Taking it off AUTO

What are the problems with 'Auto'?

when the camera gets it wrong with the:

Exposure

Colour

Camera Shake

Focus

Flash







The runaway skier exercise

Problems with 'AUTO'

Exposure

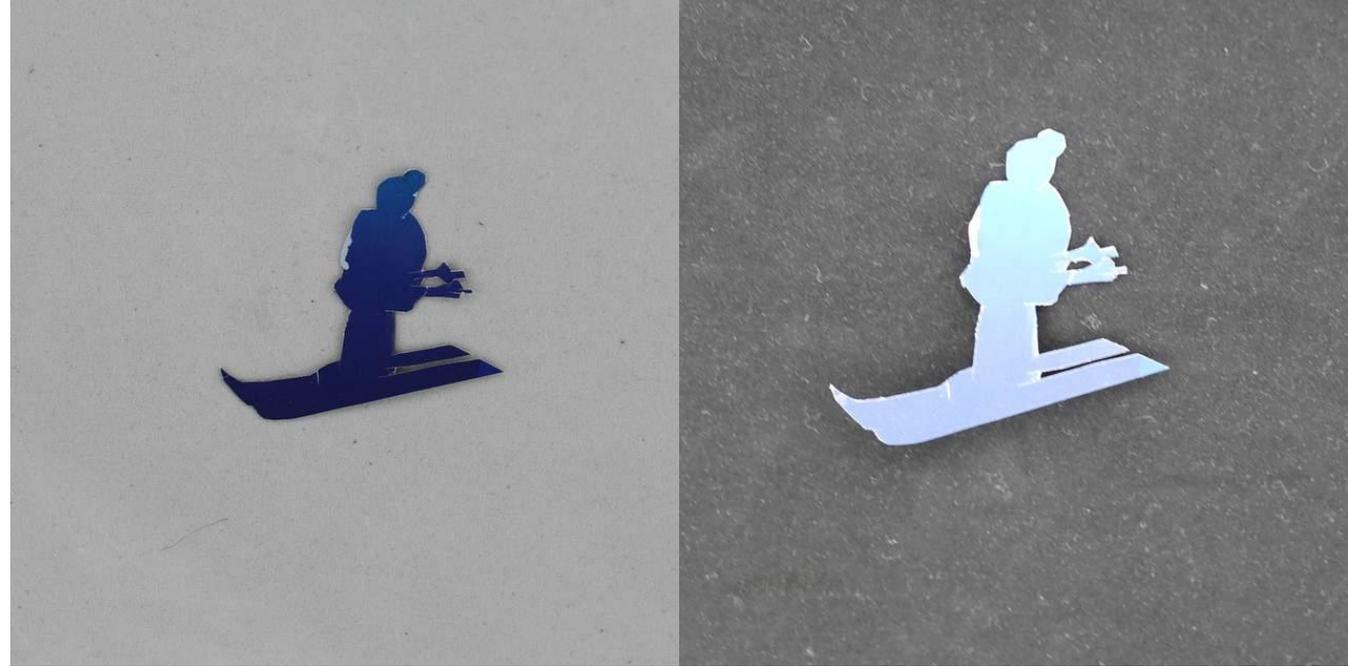
Grey snow



Problems with 'AUTO'

Exposure

Grey snow and grey ash



Problems with 'AUTO'

Exposure

Grey snow and grey ash

Instead of white snow and black ash



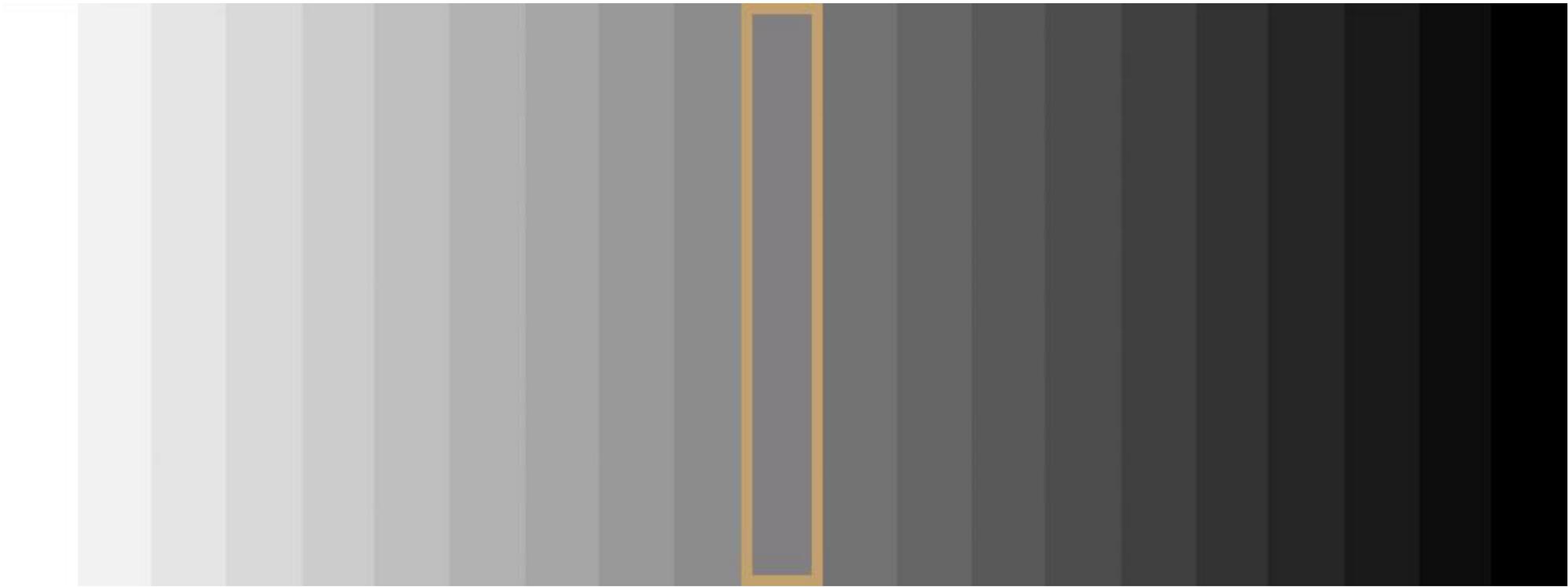
Problems with 'AUTO'

Exposure

SO WHAT IS HAPPENING HERE!

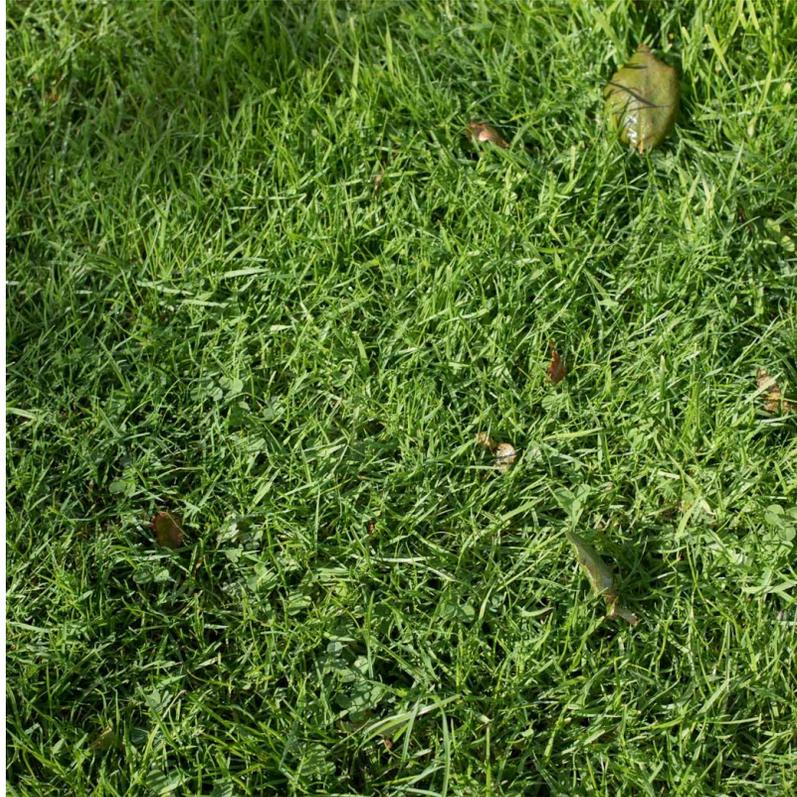


The camera 'thinks' good exposure is 18% reflectivity – mid grey



The camera 'thinks' good exposure is 18% reflectivity

Which is good for



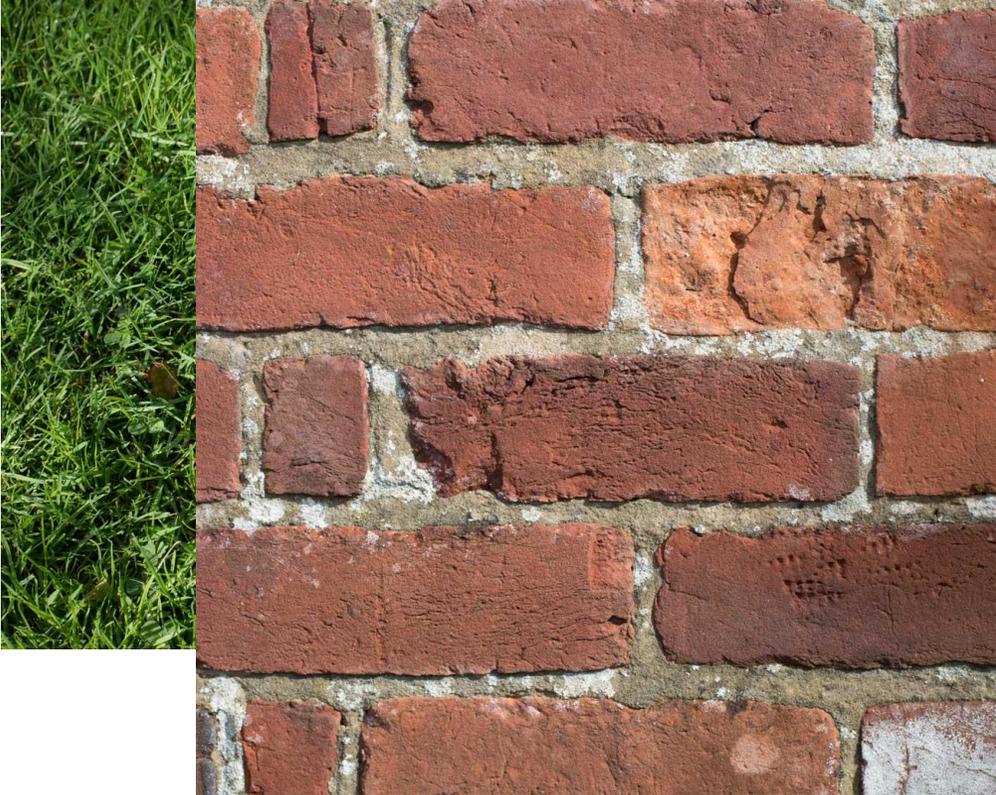
Grass

The camera 'thinks' good exposure is 18% reflectivity

Which is good for



Grass



Brickwork

The camera 'thinks' good exposure is 18% reflectivity

Which is good for



Grass



Brickwork



Your Hand

So the First Problem with AUTO is **Exposure**

The camera defaults to centre of the spectrum (mid grey)

Which is a problem when the image is very bright or very dark

Situations that 'fool' the camera:



Bright SNOW or
BEACH scenes - the
camera tends to
UNDER – expose

Increase by one or
two stops



Dark scenes the
camera tends to
OVER – expose

Decrease by one or
two stops

The thing to remember is – **NO MORE AUTO**

sNOw MORE

- Before we go on check out

'Blinkies' (Highlight Alerts)

These warn you of a danger of **'over exposure'** giving you areas of your image, which are flat white with no detail



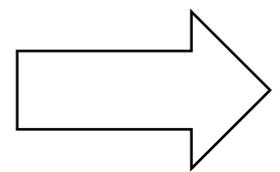
The Second Problem is White Balance



Third Problem is **Camera Shake**

The camera may set the shutter speed too slow for the conditions

So instead of this

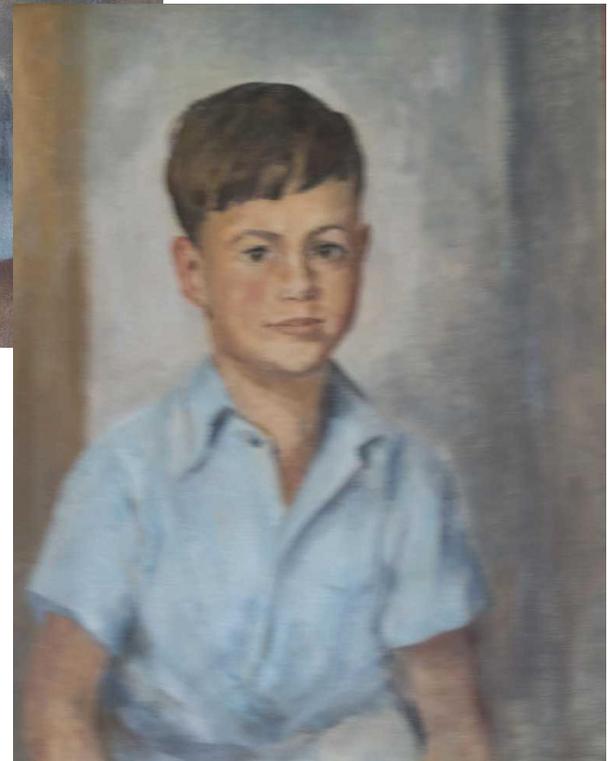
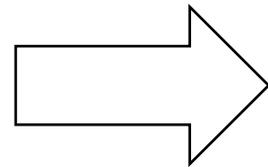


Third Problem is **Camera Shake**

The camera may set the shutter speed too slow for the conditions



You get this



Similarly **Motion Blur**

The camera may set the shutter speed too slow for the conditions

Dancing is good for motion blur!



Motion Blur used creatively



Courtesy: Dan Pettus Photo

To avoid Camera Shake

- Use a Tripod
- or a faster Shutter Speed

What shutter speed is good for you to 'Hand Hold' the camera?

Easy guide is the **Reciprocal Rule**

e.g. using a 50 ml lens, $1/50^{\text{th}}$ sec shutter speed should be OK hand held

So using a 300mm lens I should be able to hand hold and get a sharp picture at $1/300^{\text{th}}$ sec shutter speed.

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But my lens has four stops of Image Stabilization

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One stop is $1/150^{\text{th}}$

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But my lens has four stops of Image Stabilization

One stop is $1/150^{\text{th}}$, two stops is $1/75^{\text{th}}$

So using a 300mm lens I should be able to hand hold and get a sharp picture at $1/300^{\text{th}}$ sec shutter speed.

But my lens has four stops of Image Stabilization

One stop is $1/150^{\text{th}}$, two stops is $1/75^{\text{th}}$, three stops is $1/32^{\text{th}}$

So using a 300mm lens I should be able to hand hold and get a sharp picture at $1/300^{\text{th}}$ sec shutter speed.

But my lens has four stops of Image Stabilization

One stop is $1/150^{\text{th}}$, two stops is $1/75^{\text{th}}$, three stops is $1/32^{\text{th}}$ and 4 stops is $1/15^{\text{th}}$

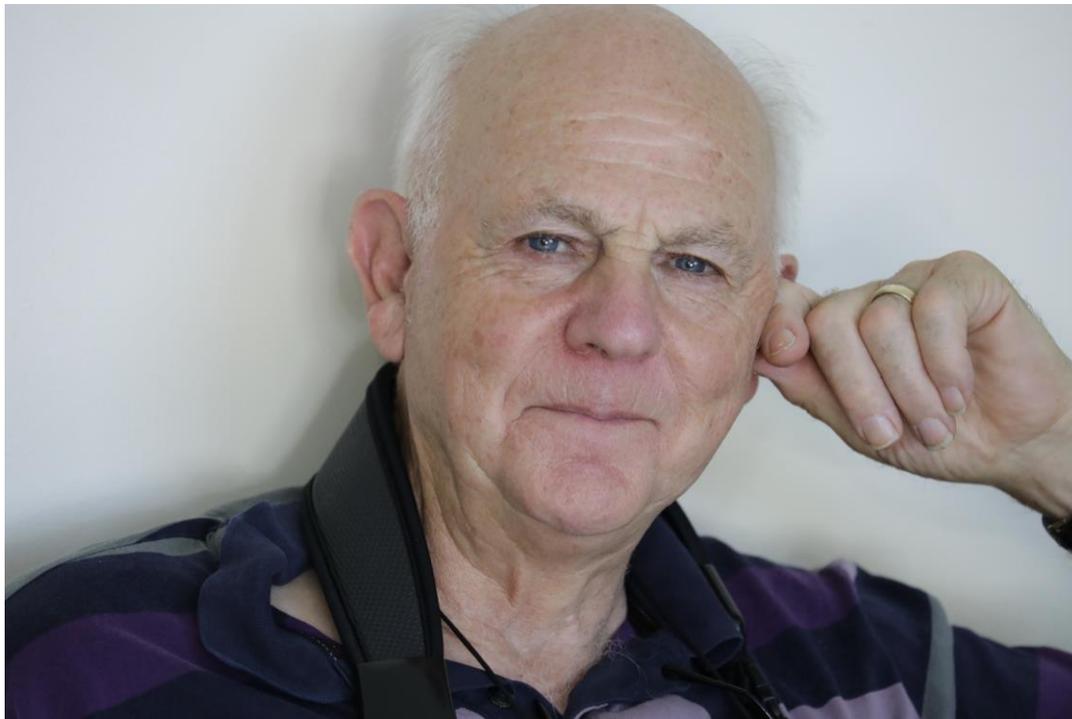
So using a 300mm lens I should be able to hand hold and get a sharp picture at 1/300th sec shutter speed.

But my lens has four stops of Image Stabilization

One stop is 1/150th, two stops is 1/75th, three stops is 1/32th and 4 stops is 1/15th

1/15th f5.6, ISO 2500

The same with the Image Stabilization turned off

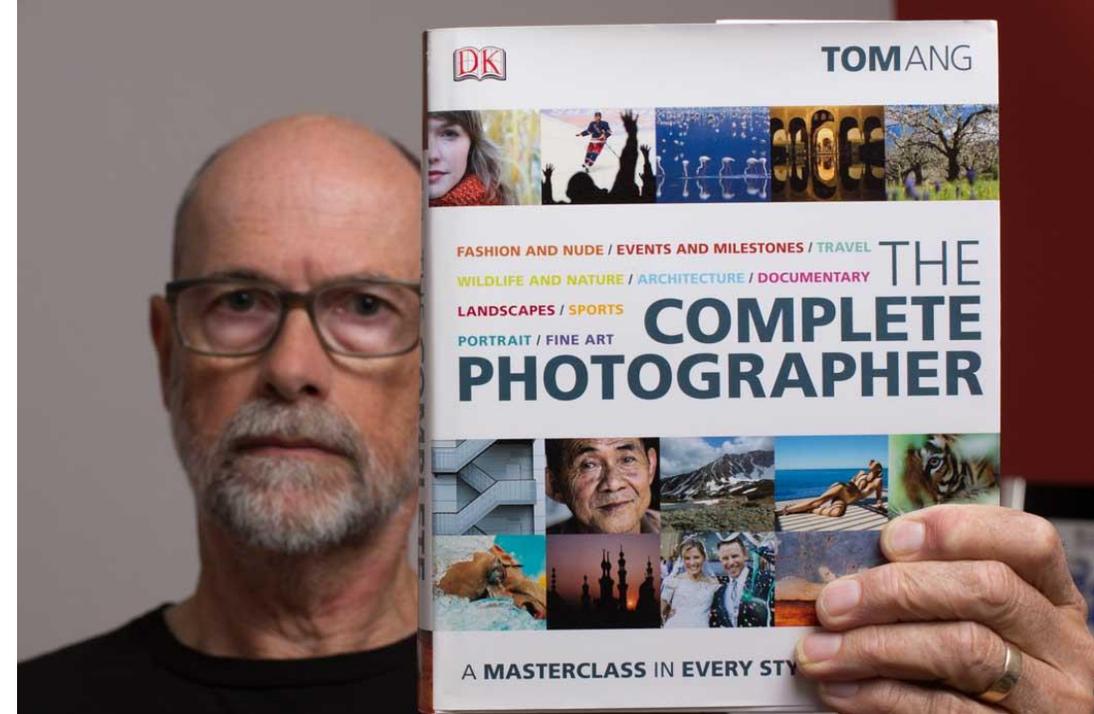


To avoid Motion Blur - use shutter speed fast enough to stop motion

To avoid Motion Blur - use shutter speed fast enough to stop motion
- 'pan' on the subject

The Forth Problem **Incorrect Focus**

The camera focuses on the nearest subject in the frame

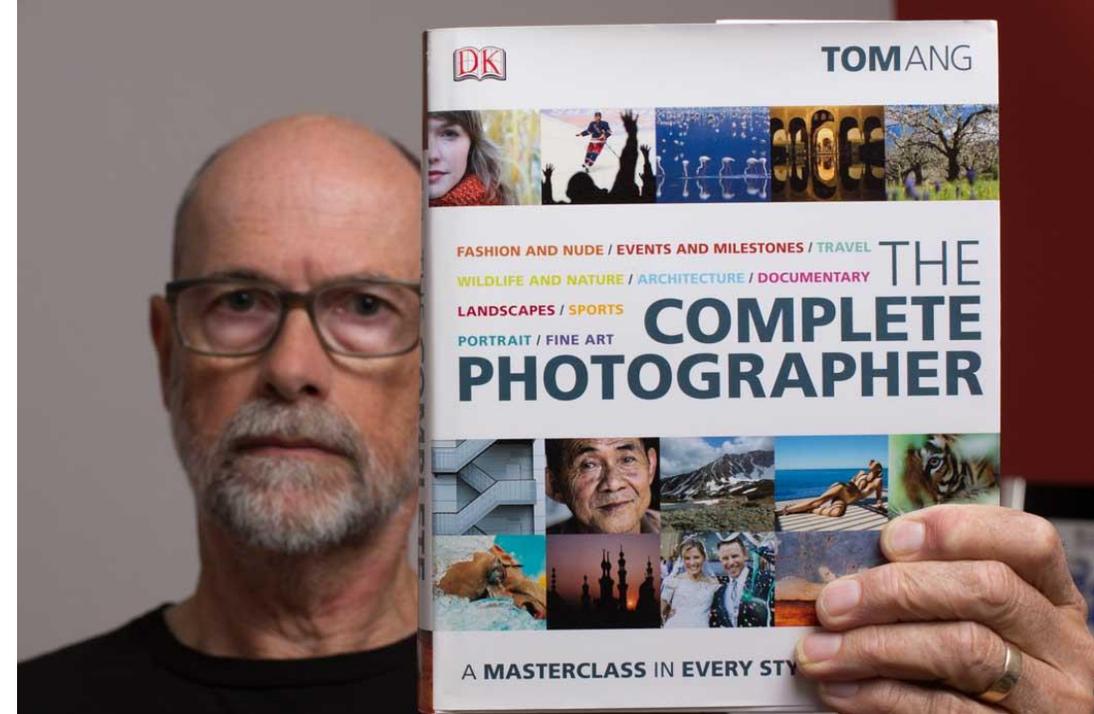


The Forth Problem Incorrect
Focus

The camera focuses on the nearest subject in the frame

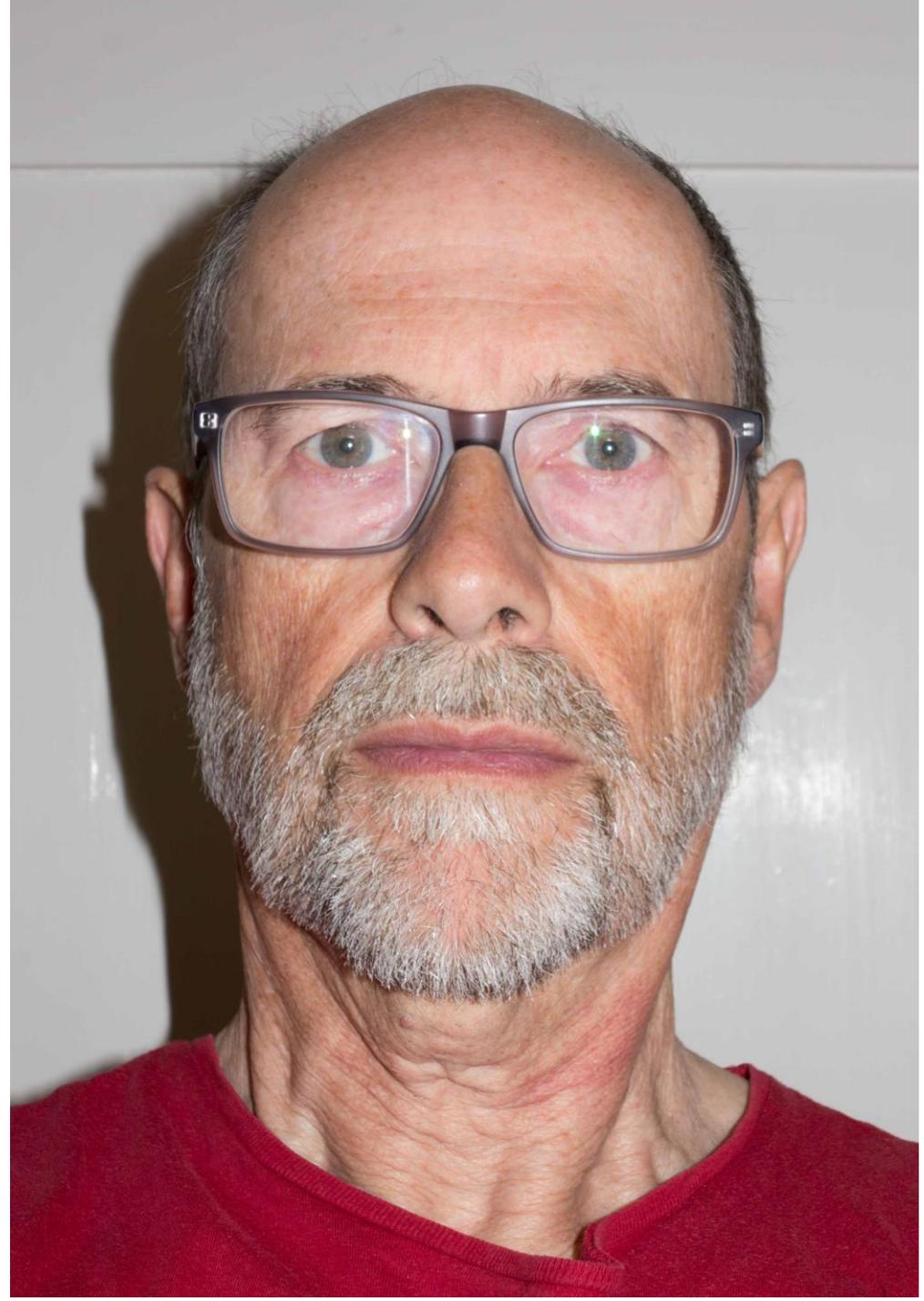
Or

When two people being photographed the camera focuses between them



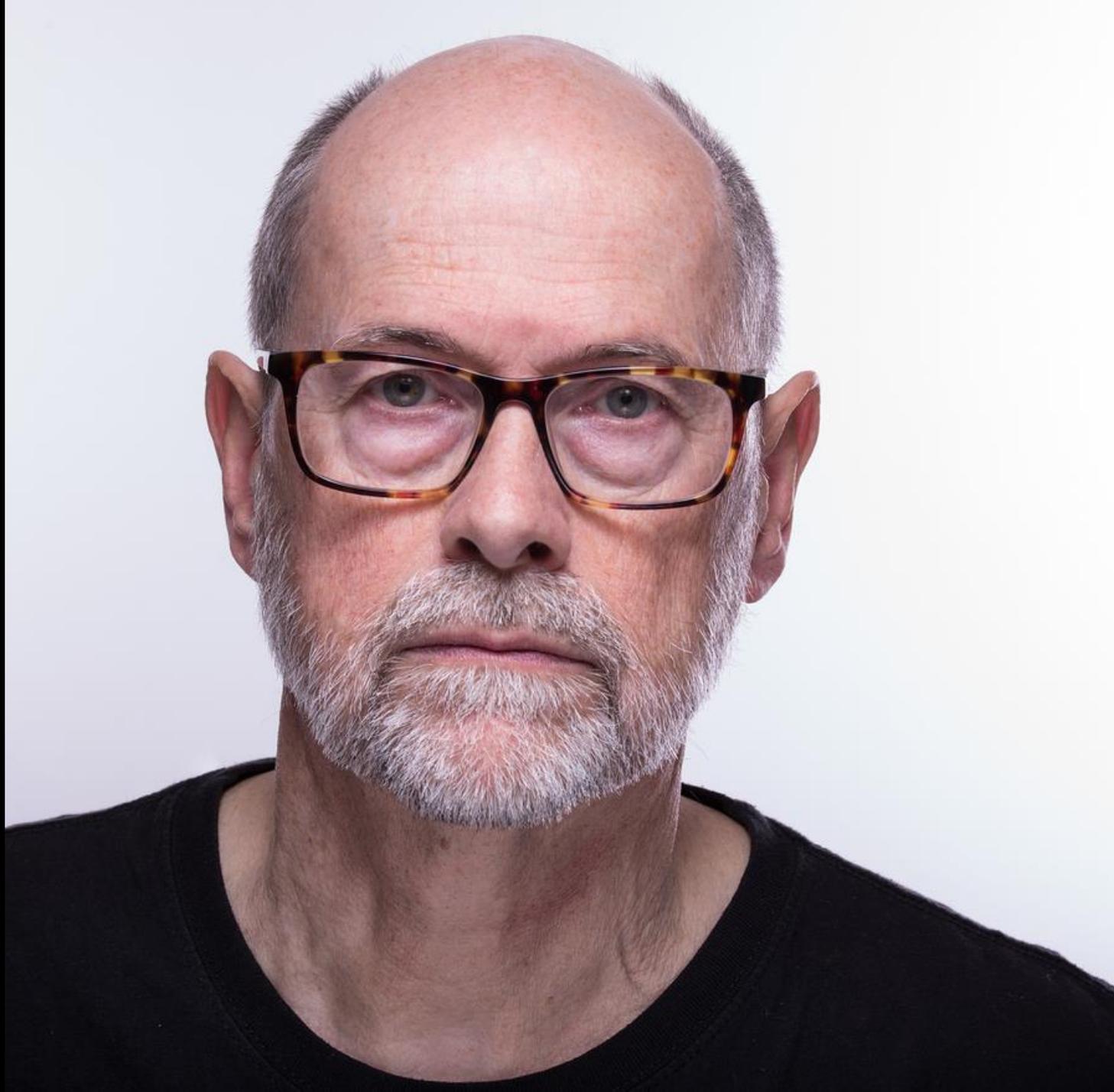
Pop up Flash

Harsh shadows on the wall
Little modelling
Shadow from the camera lens



Plus the dreaded red eye!





I can do Selfies!

When the camera is on AUTO you are giving away control, and at best this can lead to mediocre images

If you know the pitfalls of 'AUTO'
then you are halfway to taking
control and getting the pictures
you want.

Glossary - Camera

Compact

- Camera small in size, geared to the non-technical end

DSLR

- Digital Single Lens Reflex (changeable lenses)

Bridge

- Somewhere in between (non-changeable lens)

Full Frame

- Camera with a sensor the size of old 35mm film frame

Micro 4/3, APS-C etc.

- Differing sizes of sensor

Mirrorless

- Camera with electronic viewfinder, shutter etc.

Glossary - Camera workings

Exposure

- The amount of light needed to record the image

Shutter/Shutter Speed

- The device to start and finish the exposure

Aperture

- The size of the hole which lets in light

Sensor

- The device for converting light to electrical signal

ISO

- Sensitivity setting of the sensor

Auto Focus

- Camera's ability to focus as required

Glossary - Lens

- Depth of Field** - The amount in front and behind the subject which is in focus
- Angle of View** - The width the camera can see
- Wide Angle** - Lens with large Angle of View
- Telephoto** - Narrow Angle of View Lens for subjects further away
- Macro** - Lens for close up work
- Lens Hood** - Shield to guard against extraneous light entering lens
- Lens Cap** - Protective cover for when lens not in use